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TRANSLATION OF
Presidential Address

Read at the Eleventh Meeting
of the Hyderabad Educational Conference,
At the Town Hall, HYDERABAD-Deccan

On the 18th August, 1938

By
MOHD. A. R. KHAN, F. R. A. S.

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A Glance at Education in Modern Civilized Countries

In the present epoch, I regret to say, all the affairs of the world are becoming highly complicated. During the fifty years Western nations have obtained control over fire, water and earth so rapidly and, with the aid of science, achieved such signal success in providing ways and means for comfort, that an influential clique among them began in pride, to ignore the very first principles of humanity. In getting access to some secrets of Nature this clique lost sight of even the very origin of the human race. Forbearance, kindness, sympathy and fellow-feeling, which form the essential characteristics of even animals in the higher grade of evolution and which constitute the main factors in the elevation of man from the category of wild beasts to his present exalted position, came to be regarded as symptoms of weakness. Religion was considered to be synonymous with superstition; Social and moral rules and regulations were subordinated to convenience and utility; a gulf as wide as that between heaven and earth was thrust in to differentiate between one's own people and aliens; and in such environments mentality was subjugated. A pure and holy process like education began to be employed as a means of propaganda for moulding peculiar types of mental

It is greatly to be feared that in some parts of India this dangerous system of education may lay its hold on the public mind. Great Britain with her colonies and the American continent, however, are yet immune from its poisonous effects.

No one can afford to live a life of peace and satisfaction while this terrible picture of the present generation looms large before us. The most ironical feature about this state of affairs is that every incident associated with it is regarded as a consequence of civilization itself. We should therefore be on our guard and avoid blindly adopting methods of education and civic life at present in vogue in Russia, Germany and Italy, under the lure of their apparent material progress.

The correct aim of education is to contribute towards the mental, physical, intellectual and moral evolution of man. Nature herself has inspired as with education, and in accordance with her primeval policy, having sown the seed of education in our hearts, simultaneously with our coming into existence, also expects us to nurture this seed with the help of our senses and intellect and reap the benefits of its development. Biological research points out that it was by following this process that man not only achieved supremacy over other animals, but having gradually acquired knowledge of the laws of nature, determined to conquer everything around him. In reality this very effort and endeavour on his part guided him on to civilization and progress. But unfortunately the victories he continually won over dead matter and the lower animals intoxicated him to such an extent that he forgot the very meaning of civilization, which he had learnt after thousands of years of toilsome experience.

It was a lesson taught by nature herself that the human species contrived to separate into isolated groups of nations, in accordance with local and temporary distinctions, to live a life of complete harmony among its own members and of sympathy and amicability with members of other groups (which

may appropriately be called cousins from the same family stock); and it was this same lesson that enabled man to acquire the main attributes of humanity. But unfortunately, these feelings of sympathy and amicability continued to form an integral part of man's character only as long as he quailed before the severity of cyclic and seasonal disturbances, and was unable to repair with alacrity the damages caused by the ravages of thunder and lightning, earthquakes and pestilential diseases. Now that he has to a certain extent acquainted himself with the apparent causes of these externally imposed calamities and can, at least, control them to the extent of preventing them from interfering with his worldly occupations—if not completely overcoming them, he has commenced to abandon the virtues he acquired even in his pre-natal stage, and, having overcome dead matter and the lower animals, launched forth on the expedition of conquering his fellow beings—in other words, set out to commit suicide ‘*en-masse*’.

Material Progress in the West with the Advance of Science.

There is no doubt that the present material progress of Western countries is due to their scientific achievements. Scientists in their pure and unselfish search for truth, unbiassed by the general trend of the world and its prejudices, published their epoch-making discoveries.

Another batch of investigators making use of these discoveries, invented instruments and machinery, compounds and contrivances of ever increasing power and applicability, mainly with a desire to support good and counteract evil; but, it is sad to observe, powerful and wealthy nations with warlike propensities utilized these inventions for quite different purposes, thus Jeopardizing the peace of the world. Armaments began to heap up, ostensibly in the name of self-defence, and objects which otherwise would have been deemed the most beautiful products of investigations and research, became the instruments of wholesale murder and devastation! To hold science or its votaries

esponsible for this state of affairs is glaring injustice. The real culprits are those who abuse these gifts of science. In the words of Sa'adi, "you were given an axe to chop wood, not to pull down the walls of a mosque." The terrible calamities inflicted by Italy on the poor and unarmed peoples of Abyssinia and other countries through poison-gas and explosive bombs, the burden under which progressive nations are groaning to meet the heavy expenses of manufacturing munitions and war-materials and the agonizing restlessness of civil populations under constant fear of sudden and unprovoked attacks from their neighbourly nations, are features of modern civilization that need no comment.

The only way to save the civilized world from this threatening universal catastrophe is by adopting a reformed and rational system of education. Just as a judicious consciousness of nationality is an important factor in the development of civilization, its undue obsession is highly detrimental. If human beings are appropriately instructed in the teachings and counsels of the great thinkers of the East, while still in their impressionable age, it is possible to reconstruct the world on a basis of peace and universal satisfaction. What arguments can be more convincing than those embodied in the following couplets:-

"Human beings are to one another as the limbs of one
and the same body;

"As they have been created from a common origin.

"When one limb happens to suffer from some disorder,

"All the others cease to enjoy rest."

In their attempt to save the world from this catastrophe a growing circle of scientists and broad-minded statesmen of various countries recommend a course of liberal education in which Biology occupies a prominent place, so that students may know where man comes in, in the general scheme of Life, and what is the true meaning of Evolution; how the development of various nations has been affected (for good or evil) by geographical conditions; how far the branch of knowledge generally called History

really represents the history of the human race ; to what extent published statements coincide with actual facts and how is it possible at all to have access to truth. Similarly, what difference there is between the Discoveries of Science and the Theories put forward for their explanation. The opinion prevailing among the uninitiated that Science actively undermines belief in God and aims at the destruction of all codes of morality is a downright falsehood. A recent statement made by Warburg in connection with the emission of rays from living matter, that "In Science one cannot prove there are no ghosts", should set public minds at ease as to what really is the aim and object of Science.

Need for proper training in Religion and Morals.

While Europe is laying stress on the importance of Biological Studies, to convince human beings of their common origin, I am of opinion that the same object may be easily acquired in Asia (especially India) by having recourse to proper Religious instruction. Scholars of all religions, if they really deserve to be called scholars, notice the same essential differences between good and evil, and identical principles of Ethics in all the religious teachings of the world. If we ignore the details of rites and rituals, all religions will be found to aim intrinsically at the unification of mankind, in general. It should be our duty to take advantage of these fundamental laws of Religion and its general teachings and try to eradicate from earth all racial dissensions and discords.

Present State of Education in India.

I think I have given enough time to touch upon the educational problems arising out of the present disturbed condition of the civilized world, and to suggest basic principles of solving them. I must now try to refer briefly to the present state of Educational institutions in India and their recent schemes of improvement. At the same time I would like to make a few sincere suggestions, based on my

ing experience, concerning the latest proposals about to be adopted by the Educational department of H.E.H. the Nizam's Government, as announced in their recently published reports. I am sure all concerned that it is by no means my intention to criticise the Educational policies at present in vogue in British India or H. E. H's Dominions. How is it possible for a man whose advice was sought by the department for 30 years in practically all important matters of Education in Hyderabad and who had the unique opportunity of developing the most important institution of the Osmania University, in the days of its early evolution, to bring it to the highest standard of efficiency in India, to adopt a critical attitude under any circumstances. Above all, his self-restraint does not allow him to put forward any proposals, uncalled for. Whatever will be said on this occasion will be based on the fact that he is the representative of the Hyderabad Educational Conference — a body of distinguished Educationists and promoters of Education in the State. Whatever advice will be given, it will be in the hope that the department will take advantage of it and the country may escape the criticisms of its opponents. Moreover, as far as possible, every attempt will be made to impress on the public how it can co-operate with the government in its Educational policy and give it a helping hand.

Nowadays we hear constantly all over India that there are a great many educated men in the country, but few of them are fit for employment. From this we must infer that either their education is not good enough to qualify them for service, or the services are such that their duties cannot be discharged by educated men of the present generation. In any case, both the defects can be remedied, if the right attempt is made.

The real object of University education is to introduce students to the most advanced researches carried out by the great masters, and acquaint them with the most important

discoveries made by these masters, so that, wherever possible, the students themselves may, after completing their courses of study, devote their talents and energies to widen still further the boundaries of knowledge. It must be remembered that a country where learned men of such advanced attainments are not turned out in adequate numbers is denied admission to the category of civilized nations, according to modern standards. At the same time, such centres of advanced learning are not necessarily recruiting grounds for candidates suitable for routine employments - if not positively unfit for them. Hence Educational departments must provide means for giving the rank and file of students an education that will qualify them for such routine services, in addition to catering for really advanced education for the more gifted candidates.

But if a country is so unfortunate as to offer no employments other than those of a clerical nature or its equivalent, if one were to put out of consideration the higher grades of service open only to a few lucky fellows or candidates winning success in competitive examinations, and the lower grades of Army and Police services for which higher education brings no special reward, then it would not be fair to condemn higher education or those who strive to acquire it. The nature of the existing posts themselves may be judged to stand in need of remodelling. But without the intrinsic urge for such a change any such attempt will dislocate work in its present course. It is in such environments as these that the class of unfortunates comes into existence who are dubbed 'Learned Beggars' by some of our distinguished and prosperous statesmen. The name is probably meant to signify 'Educated Beggars' and not Learned Beggars, in the true sense of the appellation. The existence of Educated Beggars alone is an insult to civilization. A country where learned men come under the category of beggars would be the worst imaginable.

Means suggested to promote Technical Education.

Schemes have recently been planned to check the increase of 'educated beggars' both in British India and in H. E. Hs' Dominions, and attempts are being made to carry them into effect. Though I do not belong to that body of lucky people whose opinions have been sought especially by our Educational department', yet I once called on the former D. P. I. and obtained from him a copy of the Government Report entitled 'The Reorganisation of Education'. As far as I could gather from this report the scheme appears to be appropriate to the occasion and it is quite likely that when it is put into practice, students who are really unfit for higher education would succeed in securing employment in Technical, commercial or Agricultural pursuits. I consider it necessary, however, to draw attention to certain matters in this connection. First of all, it should be borne in mind that Technical and Industrial works had been in full swing in Great Britain and other Industrial Countries of Europe and America before the opening of schools for teaching these subjects; and, as is evident from G. A. N. Loundes' recent little book 'The Silent Social Revolution', published by the Oxford University Press, not only are the youngsters working in industrial concerns taught systematically the basic principles of technology and allied subjects in these Technical Schools, every attempt is made also to impart Secondary and Cultural Education to grown-up people who get into service in industrial works immediately after their Primary Education to earn livelihood for themselves and their parents. At all events, it will be safe to assert that the benefits expected from Technical Education will be fully realized when industries will develop profusely in the state. It will obviously be a great mistake to postpone the opening of Technical Schools till that happy era dawns. These Technical Schools themselves may, in course of time, serve as an incentive to shrewd capitalists to found appropriate industries throughout the length and breadth of the country.

While referring to industries it is painful to say that we are scared by the spectres of those heart-broken unfortunates, about to breathe their last, who invested their modest earnings of life-long labour in the purchase of share-certificates of industrial companies, in the hope of serving their country by contributing to its industrial development and of gaining an honest source of income, fascinated by the glamour of high-sounding names of advertised directors; and who have been utterly ruined by the subsequent bankruptcy of these companies. If there can be any consolation at all for them, it is in the pious contemplation that their hard-earned money contributed to the benefit of the salaried employees of these companies all the time these bodies existed. In other words, only one ambition of the share holders viz, to serve their country could be realised and matters stopped at that.

Such is also the condition of the smaller banks which unfortunately are multiplying rapidly all over the country, and are ruining hundreds of innocent families. If Government will not attend speedily to these public nuisances and introduce measures to stop them through legislation etc., people will be as afraid of industries, commerce and banking as children are of bitter medicine.

Plans suggested to ensure success of Industries

A short time ago, I was asked, as a man of Science, by a well-know Indian industrial capitalist, whose sugar and other factories are working successfully in various parts of British India, as to what I considered most important for the success of indigenous industries, I at once told him that, in my opinion, honesty was the first and foremost factor, and next to it was correct technical knowledge. On hearing this he remarked that years of bitter experience had taught him exactly what I stated. In the present state of the world, it must be admitted that honesty can be inspired only through Divine Agency; as regards technical

knowledge, however, this can be acquired through proper higher education and Research Laboratories. It would be advisable to appoint a Research Council either by Government or by the Industrial companies, in which experts in pure science and various branches of Industries and Agriculture may participate, as far as possible, solely for the welfare of the country and help with their valuable advice. Similar views have been expressed in the June number of Science and Culture:

To ascertain which of the indigenous industries are worth developing and where, perhaps the best plan would be to invite the opinions of competent touring officers in the Revenue and Educational departments and such other persons as are especially interested in these matters. On receipt of their opinions the State Commerce and Industries department may be consulted and a suitable commission appointed to tour in the districts and submit their report within a prescribed time. In accordance with the recommendations thus received, enterprising capitalists may be invited to float companies for establishing the industries specified. The State should also enter in these companies by either purchasing an adequate number of their shares or advance to them appropriate loans, so that a careful watch may be maintained on their working.

India failed to enter the field of industries with confidence and determination owing to her own belief that she was mainly (if not exclusively) an Agricultural country. Perhaps Mysore is the first State to break away from this traditional inferiority complex; and to put a bold step forward in this direction, Hyderabad should also turn its attention towards industrialization of the country as quickly as possible, so that future generations may be assured of reliable means of subsistence.

For the development of Agriculture I have already recommended in a former address that a Faculty of this subject should

be opened in the Osmania University. Candidates graduating in this Faculty may be encouraged to qualify themselves fully for this pursuit by grant of lands on favourable terms, according to their hereditary connection with the profession, financial status and earnestness of enterprise.

Our University Students and Teachers

Commenting on the results of education in our Indian Universities, Indian critics themselves have often said that most of the students that enter our universities are unfit for them ; that the main object of these students is to keep themselves engaged and get a University hall mark, in the hope of eventual success in securing a job in the clerical or teaching or some other similar line. As far as I can judge, this opinion is certainly correct to a large extent. But when we see that most of the unsuccessful candidates of our Indian Universities, when they migrate to Europe or America, do not return home without obtaining some degree or diploma of those foreign universities, we are compelled to admit that better education is available in foreign universities or, at least, their examinations are conducted on more rational lines. There is thus plenty of scope for reforming our Indian Universities and improving our system of Examination. Professors and Teachers of British Universities are undoubtedly abler and more conscientious than our own, barring some brilliant exceptions. Before we condemn our students as intrinsically unfit for higher education, we should try to rouse in our University teachers a greater enthusiasm for education and a desire to make their lectures more intelligible and attractive, to their pupils. There is an intimate relation between the pupils' intellectual development and the Teacher's enthusiasm for teaching. A famous Cambridge coach is reputed to have said that, no matter what the academic standard of his pupil at the time of joining his classes, he would eventually pass out as a high class wrangler, if he

ollowed faithfully the instructions he was given. Reported stories undergo considerable modification from actual facts when passed from mouth to mouth and generation to generation; but, whoever has had the good fortune to be a pupil, in the real sense of the word, of a great Teacher in a European University, knows thoroughly well what a tremendous influence such men have on the mental and intellectual development of their students.

I have had a life-long connection with the Educational profession. All types of school and college students have happened to be my pupils. After years of experience I have come to the conclusion that a pupil who does not enjoy the kind attention of his master rarely wins success in the field of Learning. It is well-nigh impossible for him to soar to heights of fruitful Research unless and until his intellectual master or 'guru' accepts him as a loyal disciple or 'chela'. In the earlier stages of education, if a student fails to meet with the guidance of a conscientious teacher, a large period of his life is utterly wasted. Most students in India are weak in Mathematics, English and Science, really because they have had for teachers in their first stages of education men who have had no interest in the subjects they undertook to teach, and did not know what difficulties their poor students had in understanding these subjects, and how these difficulties could best be solved.

Need for more Research workers and Original Investigators in Hyderabad.

It is gratifying to note that Hyderabad has turned out some good scholars in the past few years. Since they were well cared for and awarded scholarships to prosecute higher studies in world's foremost seats of learning, they not only rose to positions of merit in their examination, they have kept themselves occupied with research work on return to Hyderabad and acquired

places of honour in the estimation of their follow-workers in India. Most of them have been students of the Osmania University College at the time I was its principal. For the welfare of the country I can assert, on the basis of personal experience, that good scholars are mostly the products of careful encouragement and intellectual nourishment. The man entrusted with their "manufacture" should, of course, have adequate discernment to pick out competent candidates, capable of advanced intellectual development; should know what subjects they can really specialise in, and how far they can be left free to exercise their own faculties.

In identifying such promising young scholars I followed the suggestions of the poet Sa'adi, embodied in the following couplets which he apparently composed with a somewhat different object in view :—

- " At the departure of a caravan a man's young son got
accidentally separated from him,
- " He searched after the boy during the night ;
- " Ransacked every camp and ran about in every direction.
- " At last in the darkness of the night he found the
Light of his Eyes.
- " When he returned to his comrades in the caravan,
- " I heard him tell the camel driver.
- " Do you now how I managed to discover my dear child ?
- " Every one with whom I came up in my search, I ima-
gined him to be my own son ".

In the same spirit I regarded every student of my college as an earnest seeker after knowledge and deserving of stimulation and advancement. Those who did not really merit these compliments soon got eliminated and true genius was identified.

These scholars are now enjoying good appointments in various branches of State service and some of them are still engaged in useful research. In my opinion, however, the number of such

men is still quite inadequate. At least four or five men of outstanding intellectual attainments should be trained in each subject, who may be given enough pecuniary aid regularly till they are permanently provided for by appointment to decent salaried posts so that they may continue to pursue their investigations unhampered by financial difficulties and anxieties. No institution of higher education is entitled to respect if it does not turn out continuously research work of really high order, not merely in its own estimation, but according to the consensus of opinion of competent authorities. Such advanced investigations will obviously require costly equipment and apparatus — Whatever money will be spent in this direction, will be well invested, if only such apparatus is purchased with the advice of real experts and the work of the institution is carefully scrutinized from time to time.

Need for Co-operation of wealthy Citizens.

On this occasion I wish particularly to draw the attention of that important class of wealthy citizens whose generous help can prove to be of utmost value to the country. During the Rule of H. E. H. the present Nizam, the State is spending money munificently on education, economical developments and works of public welfare; but it is sad to observe that, with a few notable exceptions, no activity is shown by the public in any of these concerns. I do not think there is a dearth of rich people in the State. We find here in addition to members of the aristocracy a large body of exceedingly wealthy capitalists and contractors who enjoy a life of great luxury and splendour. If these lucky people interest themselves in the educational needs of the country and try to walk in the footsteps of World's greatest benefactors, like Carnegie, Rockefeller, Alfred Nobel, Lord Nuffield and others, what wonder that a great impetus would be given to scientific research and other great activities, that may place Hyderabad in the front rank of progressive countries of the World.

An idea of our present state of helplessness may be formed from the fact that, after retiring from government service I applied myself heart and soul to work in Meteoric Astronomy and was rewarded by invitation not only to become member of Societies and Associations devoted to the study of this subject, but to take active part in an important International Observational Programme, for which a powerful comet-seeker was necessary. I regret to say that I failed to secure such a telescope anywhere in India and the price offered for one to be ordered from England was much above my dwindled means. When I approached some of our local wealthy magnates for sympathetic co-operation, they paid no attention to the matter, setting it down as an unprofitable hobby. Undeterred by such discouragement, I am still occupied with my favourite occupation; but it would have been ever so much better, if there had been some relief from pecuniary difficulties.

OUR EXAMINATIONS

While referring to the better systems of Education in foreign countries I drew attention to the more rational character of their examinations. I shall now try to analyse this rather vexed question. There is a hue and cry all over the world that examinations, especially university and competitive examinations for admission into service, demand an enormous amount of patience from their candidates and often exhaust all their energies. The results of examination are unconvincing (as a rule) to all except those who are fortunate enough to be declared successful. It is, of course, a natural consequence of human psychology to doubt the fairness of a test that disappoints men in their cherished objects. But we should try also to endeavour to realise the difficulties that face the examining bodies. As a rule, the questions set for an examination are framed by the same persons who are appointed to value their answers. Even if the two persons are different, there is no reason to doubt the capacity

answer-valuers to understand thoroughly the questions set for examination and to be able to solve them with great facility. When these people begin to receive piles of answer-books and are instructed to submit their results of valuation and detailed report within a prescribed time, they withdraw themselves from their other occupations and attend exclusively to this work. Each candidate has his peculiar mode of expression; his handwriting runs over the whole gamut of legibility and illegibility; on top of all this, the examiner's sympathy varies from morning to evening (and day to day) with such internal and external factors as fitness of digestion and fairness of weather. Such being the case, except in certain branches of mathematics, uniformity in valuation of answers is difficult, even for the most experienced and conscientious examiner. That is why there is often a great uncertainty in judging the proficiency of candidates by their results of examination, and the certificates granted to several qualified persons stand in need of verification at every stage. In spite of all these facts, a simpler, speedier or more economical method of distinguishing the well-educated from the non-educated has not as yet been evolved, and we can assert without fear of contradiction that the results adjudged by our own university examinations are at least correct to 75 P. C.

The most glaring defect in the examinations of our present universities lies in the attempt of examiners to find out what a candidate does not know, whereas in the more rational system of the west, stress is laid on ascertaining what the candidate actually knows and how far this knowledge is correct. If our universities were to adopt this policy, a larger number of pupils would profit by higher education and a vast body of students would escape the tortures of disappointment and despair at the critical stage of their development.

Recreation as an aid to education.

There can be no better way of imparting education than

through recreation. Recreation should be made an essential feature of child education, and such is actually done nowadays. It is being more and more increasingly adopted in the case of adults also. Kindergarten system has been in vogue in our country for a considerable time. When it was first introduced into the Madrsa-i-aliya, I was a pupil of that class. I still remember the fascination the school charts of Natural Phenomena and the Celestial Sphere had for me in those early days. What wonder that it was due to the secret, silent influence of these early impressions that I acquired later a deep interest in the various branches of Natural Science, and am still a keen watcher of celestial phenomena. I am sure this system is proving equally stimulating to others.

Quite recently (through Ward's Mineral Bulletins) I have come to know that American Boy Scouts, when out camping in the country, get instructions from their Senior comrades in the essentials of Geology and Mineralogy, advantage being taken of the environments they happen to be in at the time; and are encouraged to collect choice specimens of educational value. The same method, I understand, is being employed to acquire practical knowledge of Geography and History. It is hoped that our school boys also will make good use of such opportunities.

The Table-land of the Deccan is a veritable mine of Scientific problems awaiting investigation and solution. If students are encouraged to seek after them from a tender age, it is very likely that a number of curious phenomena and interesting observations will be presented before the Scientific world. I may be pardoned to mention that two of my papers on Geo-physics originated from participating in such recreative excursions.

It is difficult to cite a more potent means of stimulating research than travel. Ignoring those who imagine themselves to be made of wax or glass, students of average physical and mental

y, not only welcome always the slight inconveniences caused by travel, they even go courting after them to a certain extent. If they do not rashly transgress the limits of discretion, their zeal for display of personal prowess and skill, and, naturally risking their lives, launch their relations and companions into trouble, it would be no exaggeration to say that these excursions constitute for students natural schools of ideal training. In the society of well-behaved companions and under guidance of keenwitted leaders, they will learn to acquire habits of self-reliance, forbearance, economy, devotion to duty and enthusiasm of comradeship. We note with pleasure that many schools are nowadays organizing well-conducted educational tours and excursions.

In many schools in Europe and America moving pictures are requisitioned as an aid to education. They, by no means, illustrate erotic or objectionable stories. On the other hand, they convey to the student mind, in an artistic manner, vivid impressions of the latest discoveries of Science, of imposing terrestrial and celestial phenomena and up-to date knowledge of industrial and economic characteristics of various countries. When they are used as an illustrated book to be carefully studied and pondered upon, the money spent on this rather expensive apparatus will be most efficiently employed. If they are used merely for amusement, it would be ever so much better to dispense with them altogether. The aphorism that there is no royal road to learning is as true in our own times as it was in the days of Plato and Aristotle.

Physical Training and Exercise.

Only a few months ago I read a short pamphlet entitled 'Physical Education in Germany' published by H. M. Stationery office, London, from which I gather that the German government is spending large sums of money on the physical education of the German youth with as much zeal as on the cultivation of

Science. The German public has also instituted quite a large number of regular Societies whose aims and objects are to leave no German child physically weak or its health endangered through pecuniary incompetence of parents. Although the main-springs of this vigorous activity lie in the desire to prepare the country for an expected or coveted war, it needs no great insight to see what important influence this movement has in building up the national unity of the race and improving its general health and physique. It would be a capital idea if our countrymen also participate in a similar movement—not with the object of inter-communal fighting, but with an honest desire (and government sanction) to develop a healthy and robust physique in our nation.

Female Education and its ever-increasing Importance

Except in the countries of Islam during the days of its supremacy, rights approximating to equality with men could be extended to women only after years of efforts and struggle—and are still on their way to be extended. In the early stages of civilization, man, basing his judgment on the scheme of division of labour, then in vogue, indulged in assuming a greater importance to his mental powers and responsibilities; as a result of which it was considered proper to debar women, to a certain extent, from the benefits of Education.

By slow degrees, when it began to dawn on him that the average woman's brain is almost (if not quite) as efficient for receiving education as that of the average man; and education itself became accessible to larger numbers of people, woman also acquired gradually more and more facilities for getting educated. Such has also been the line on which female education progressed in India; and nowadays we find quite a big number of well-educated women in Travencore, Bengal, Madras and Bombay etc. Hyderabad too has accelerated its pace in this direction during recent years. But just as modern statesmen are alarmed at the

immolation of men on the altar of higher education, I am afraid we are tending towards a stage which will stagger us to see women give up their home-life and wander about with degrees and diplomas in courses evolved primarily (if not exclusively) for men. Experts in human evolution will then be shocked to realize what mental and moral effect this wrong system of training will have on the future of the human race.

I must not be taken to hold the view that women should be denied higher education. I rather assert that such girls as have evinced a special aptitude for fundamental subjects like languages, mathematics, science, history, geography, etc. while passing through the Primary and Secondary stages of Education, and turn towards the University for further training, should be granted every facility to attain to their highest goal of ambition in specialization. A glance at the lives of such gifted women as Madame Curie and Sonja Kowaleuski shows that there is no lack of candidates among women who can reach the topmost rungs of the ladder in subjects like physics and mathematics—generally assumed to be distasteful to the female sex—not to speak of chemistry, medicine, music and belles lettres etc., which are admittedly the subjects that appeal to them most through their personal tastes and natural bent of mind.

In spite of all this it is best to train them largely in subjects needed for a quiet domestic life, so that their future (married) life may not be embittered by lack of adequate training. On emerging from their Primary and Secondary stages of education they may be trained in subjects like domestic economy, needle-work, physiology, hygiene, nursing, child-psychology etc., and given degrees or diplomas, if they so desire.

Unless a cataclysmal disturbance upsets our normal mentality, or human society undergoes a radical change, domestic life would be the most cherished occupation for women. It would

be most advisable, therefore to train them generally for this occupation. But if special circumstances or natural propensities induce some of them to take up medicine, teaching, literature or even public service (as profession) with or without the idea of settled domestic life, they may be trained for these professions also, after making sure of their natural fitness and the consent of their parents or guardians. At all events, women, like men, should be given a general education up to a certain standard befitting the needs of citizenship and society, so that a fair standard of culture may be maintained in the community. No religion will be found averse to such an education, if the precepts of human morality and female modesty are duly adhered to.

Facilities should be provided for on a liberal scale to cater for the health and physical development of women students along with their intellectual training. Their schools should have ample play grounds and gardens to guarantee good health for the children of all grades of social standing.

The Role of Public Enterprise in Advancement of Education

Talking of the Educational problem of India I said a little time ago that I would endeavour to explain how the public can supplement the work of the State. I shall bring this address to a close with this discussion.

A perusal of the published Reports of the Government of Hyderabad, e. g. the Annual Administration Report etc. will show what large sums are spent by the State annually on public instruction and what schemes are under its consideration. In January 1937, when the Indian Science Congress Association was holding its annual meeting at Hyderabad. I wrote, at Prof. M. N. Saha's request, a short paper on Hyderabad, which was published in that month's issue of Science and Culture. The paper surveyed briefly the historical, geographical, fiscal and other administrative matters of the State, and bore a special

reference to the rapid progress of education in the country:— what sums were being spent on Primary, Secondary, Technical, Female and Higher Education, and what programme was under consideration in the Educational Policy of the Government. The paper—I was told later—conveyed a clear idea of general educational awakening in the State, to prominent Educationists of India, especially with reference to the great strides made during the reign of the present Nizam. This particular issue is still available from the Calcutta office of the Journal. Owing to its publication I omitted to dilate on these topics in my present address.

In comparison with the attention paid by Government towards the education of the country, the part played by the Public is a vanishing quantity. The best examples of public Educational enterprise in Hyderabad, comprised in the Jagirdar College, Mahbub College, Madrasa-i-Nizamiah, Mufeed-ul-Anam etc. depend for their success largely on the grant-in-aid paid by government. As a member of the Managing Committees of the Asafiah, Islamia Secunderabad, Aizza and other High Schools, I can speak from personal knowledge, of their satisfactory progress and assert that some of them are even going beyond their means in their efforts to serve the country. It is earnestly hoped that our leading aristocracy and wealthy magnates will take a deeper interest in the affairs of the aided schools and give tangible proofs of their benevolence by at least relieving these institutions of a portion of their liabilities incurred in the purchase of library books, furniture, science apparatus and game materials.

Adult education also has great importance in the scheme of education of modern civilized states. In my opinion the best means of solving this problem is to institute a number of suitable libraries in the length and breadth of the country, provided with a liberal supply of modern books of good cultural value, in addition to the usual routine of daily and weekly news-

papers and Journals. These books constitute the best produce of current times from the points of view of comprehensiveness, clarity, accuracy of expression and reasonable cheapness. This is not the age for whiling away time by reading passionate romances, detective stories and accounts of accomplished criminals. For this very reason the best writers do not waste their talents on works of this description. Science and Philosophy which up till recently kept aloof from each other, as if confined to water-tight compartments, and one was supposed to begin where the other stopped, are now endeavouring to walk, so to say, hand in hand, under the influence of modern experimental research and observational experience. What wonder that in the next 25 or 50 years they will merge into each other to form one and the same branch of knowledge. Some of the best brains of the world are nowadays exercising their talents to achieve this object. History, which was written in bygone days to proclaim the glories of an individual nation or country, is found now to aim at the sifting of truth and arriving at impartial decisions; and above all, not only to thwart completely the attempts of war-like races and their war-minded statesmen to sow seeds of discord among various nations, but to bring them together by invoking the aid of universal laws of Science and Philosophy. Let us hope that peoples of all nations will imbibe these ideas freely, and under their influence, exert their own moral force to save the world from that catastrophe which is threatening to swallow it up by the abuse of inventions based on the pure and truthful laws of Science itself.

We cannot conceive of a more efficient method of welding together the various nations of the world than through the perusal of such books. The terrible picture that is staring us in the face, of utter breakdown of civilization owing to our ignorance and wrong use of knowledge, can be effaced only by the acquisition of correct knowledge. The best means of achieving this

object is through the agency of books of the right type. Carlyle's famous remark, that books constitute the real universities of the world, has never held so true as in the present generation.

It is hoped that the most important library in Hyderabad—The State or Asafiah Library—will continue to conform to its established traditions and guide the public along the right path. Similar libraries should be established in the districts to release people from the clutches of communal literature and derive benefit from perusal of books advocating union and mutual trust among mankind. I recommend these libraries to be founded by public subscription, the State also contributing something towards their upkeep.

Apart from help in adult education, public enterprise can be most advantageously employed for advanced research as well. The Indian Association for Cultivation of Science, Calcutta, is an institution started and maintained by public donation. It laid the foundation practically of organized experimental research by Indian Scientists in India. Previous to its installation, the laboratories of government Science colleges rarely attempted to train students beyond the limits of ordinary university examinations. They had no means of equipping themselves with Scientific apparatus and other requisites necessary for systematic research. Philanthropic people interested in Science got up an adequate sum by subscription and placed its income at the disposal of competent investigators to work on their particular problems of research. The project turned out to be most successful in a very short time. As a matter of fact, some of the very first investigations of an original character made by Indian Scientists in India, were conducted at this institution, and were introduced to the Scientific world through publication in its Journal. If enthusiastic rich men in Hyderabad were to make up their minds to start a similar association in the State it would be easily accomplished, and would provide facilities for experi-

mental research by men who are unconnected with a government laboratory or observatory, but whose scientific studies and devotion to research do not allow them to sit idle. If such an institution is started I shall be delighted to serve on its staff absolutely without remuneration and train and guide promising young men in the principles of research. Scientific investigation is impossible without a well-equipped laboratory or observatory, otherwise a lot of work would have been done here already.

Idara -i- Adabiyate Urdu whose Editor and Fellows were among the best students of the Osmania University College when I was its Principal, and have now acquired recognition all over India through their literary activities, are rendering valuable service to the cause of Urdu Literature in the country, with their own finances and a little outside pecuniary help - as may be gathered from a perusal of its publications. I have not referred to the excellent work done by the Dairat-ul-Ma'arif and the Anjuman-e-Taraqqi-e-Urdu in this connection as they are almost entirely financed by H. E. H's government. I wish our wealthier and more influential citizens will come forward to start an Institute of Scientific Research and bring Hyderabad to the fore-front in this important line as well. There is no lack of problems for solution to a busy brain; and approved experience and prolonged enterprise can never fail in their attempts, if they take up any work, free from obstructions.

In closing this address I pray for the long life and prosperity of our benign sovereign, H. E. H. the Nizam of Hyderabad and Berar, Nawab Mir Osman Ali Khan Bahadur, under whose gracious rule millions of people professing every conceivable creed and religion enjoy not only a life of perfect peace and tranquillity, but of every possible ease and comfort. During his prosperous reign the country has made such rapid progress in Education and works of public welfare that it is difficult to find a parallel in any

other country. May God Almighty grant him success in every enterprise and victory in every field of action ; keep the Princes and all the members of the Royal family happy and inspire us and our descendants to remain ever loyal subjects of the Asafiah Dynasty.

